

REMARKS

Reconsideration of the rejections set forth in the Office Action mailed May 3, 2004, is respectfully requested. Claims 1, 2, 5, and 7 have been amended. Claim 10 and 15 have been canceled. Claims 1-9, 11-14, and 16-21 remain pending in this case. Claim 1 was amended to substantially include the limitations from dependent claims 10 and 15. Claims 2, 5, and 7 were amended to further clarify the invention without narrowing the scope of the claims. Therefore, these amendments are made without introducing new matter.

Information Disclosure Statement

Applicants enclose herewith copies of the non-U.S. patent references cited in the Information Disclosure Statements received on February 28, 2001, March 26, 2001, and January 26, 2004. Applicants hereby request consideration of these references and the return of the initialed 1449s for these attached references.

Objections

Claim 1 was objected to for containing periods. Applicant has removed said periods from the claim. Claim 10 was objected to for missing a preposition in the phrase “monitoring the detectable signal ... with a monitoring device in real *time various* stages of electronic hybridization” Applicant has amended this phrase to read “in real time during various stages of electronic hybridization.” Therefore, applicants respectfully request reconsideration of the claims as amended and withdrawal of the objections.

Vagueness and Indefiniteness

Claim 2 was rejected as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. In particular, the examiner has stated that the limitation “the target nucleic acid sequence” in claim 2 lacks antecedent basis. Applicant has amended claim 1 to recite “wherein each sample nucleic acid contains a target nucleic acid sequence.” Therefore, applicant respectfully requests withdrawal of the rejection and reconsideration of the claims as amended.

Art Rejections

Claims 1-5, 7-9, 12-14, 16, 17, and 19-21 were rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Nerenberg et al. (U.S. Patent No. 6,468,742). Claim 6 was rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Nerenberg et al. in view of Fodor et al. (USP 6,309,823). Claims 10, 11, 15, and 18 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Nerenberg et al. in view of Heller et al. (USP 6,048,690).

Applicants have amended claim 1 to substantially incorporate the limitations of claims 10 and 15. Therefore, the currently amended claims are not anticipated by Nerenberg et al. since the ‘742 patent does not teach or suggest monitoring the various stages in real time or the use of a plurality of sample nucleic acids from each patient. Applicants respectfully assert that the prior art does not teach or suggest all of the limitations of the claims as amended. In particular, applicants respectfully assert that immobilizing a plurality of sample nucleic acids from each patient sample on a test site is not well within the purview of an ordinarily skilled artisan in array

design. The examiner referenced Affymetrix™ in support of this statement. Applicant respectfully asserts that Affymetrix uses a system in which the capture probes are immobilized to the array, not the sample nucleic acids. (See, e.g., attached Affymetrix Data Sheet that states “[o]ligonucleotide probes complementary to each corresponding sequence are synthesized *in situ* on the array.”) Therefore, applicants request withdrawal of the rejections and reconsideration of the claims as amended.

Double Patenting

Claims 1-5, 7-9, 12-14, 16, 17, and 19-21 were rejected under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over claims 1, 2, 12, 14, 16, 22, 32, and 33 of U.S. Patent No. 6,468,742. Claim 6 was rejected under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over claims 1 and 2 of the ‘742 patent in view of Fodor et al. (USP 6,309,823). Claims 10, 11, 15, and 18 were rejected under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over claims 1 and 2 of the ‘742 patent in view of Heller et al. (USP 6,048,690).

As stated previously, the limitations of claims 10 and 15 were substantially incorporated into independent claim 1. With respect to the rejection of claim 10 being allegedly unpatentable over claims 1 and 2 of the ‘742 patent in view of Heller et al., applicants respectfully assert that the pending claims are not an obvious variation of the invention claimed in the ‘742 patent. Claim 1 of the ‘742 patent requires that a stabilizer oligonucleotide be contiguously hybridized with the termini of a reporter. In addition, the contiguously hybridized termini of the reporter

and stabilizer form a stabilizing base stacking interaction. No such stabilizer oligonucleotide or base stacking interaction is required by the pending claims. With regard to the rejection of claim 15, as stated above, applicants do not believe that immobilizing a plurality of sample nucleic acids from patient samples are an obvious design modification in light of Affymetrix™. Therefore, applicants respectfully request withdrawal of the rejection and reconsideration of the claims as amended.

CONCLUSION

For all the foregoing reasons, Applicants assert the claims are in condition for allowance. Favorable action on the merits of the claims is therefore earnestly solicited. If any issues remain, please contact Applicants' undersigned representative at (949) 737-2900. The Commissioner is hereby authorized to charge any fees that may be required in connection with the filing of these documents to Deposit Account No. 50-2862.

Respectfully submitted,

Dated: November 3, 2004

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